

**RESTORATION INFORMATION MANAGEMENT SYSTEM
FORMERLY USED DEFENSE SITES (FUDS)
PROJECT FACT SHEET
OCTOBER 1994**

**HNC REVISION: 14 AUGUST 1997
TAG REVIEW DATE: 27 AUGUST 1997**

1. SITE NAME: Keystone Ordnance Works

SITE NUMBER: C03PA004300

LOCATION:

CITY: Geneva
COUNTY: Crawford
STATE: Pennsylvania

PROJECT NUMBER: C03PA004302

CATEGORY: OE

INPR RAC: 2

ASR RAC: 3

TAG RAC: 5

2. POC'S:

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3. SITE DESCRIPTION: The former Keystone Ordnance Works (KOW) consisted of 14,437.80 acres overlooking the Conneaut Marsh and Outlet in Greenwood Township, Crawford County, Geneva, Pennsylvania, twelve and one-half miles south of Meadville. It is bounded on the east generally by U.S. Route 19, on the south by the Mercer County Line, and on the west by "East Fallowfield Township Line".

The site is accessed by driving south from Meadville, PA, on Interstate 79 and exiting at the Geneva-Cochran Exit. Turn left onto PA State Highway 285 towards Geneva. Turn left at the junction of PA 285 and U.S. Highway 19. Turn right onto Delano Road and proceed up the hill. The road curves slightly to the right, passes the former staff and officers quarters and ends at the gate to the Kebert property where the KOW production area was located.

Currently, 510 acres are controlled by GSA for use as a U.S. Army Reserve Training Area and are not eligible for DERP/FUDS consideration. This property is designated as the U.S.A.R. Outdoor Training Site, Geneva and is used as a multiple outdoor training site. The remaining 13,927.80 acres are owned by numerous individuals and private enterprises. Mr. Larry Kebert of Kebert Developers Inc owns 3,021.00 acres, now used as industrial park land, which includes the former TNT manufacturing area, acid and power area, and a portion of the magazine area. All remaining acreage is used for either agricultural or residential purposes.

The topography of the land is relatively flat or comprised of gently rolling hills. With the exception of creek ravines, the land has an 8 percent slope or less. There are damp and swampy areas as the northeastern corner of the site is 3,000 feet from the large Conneaut Marsh. The site is located on high land 150 to 200 feet above the marsh. Vegetation varies with forested areas and grass interspersed with bushes. Farms and residences are present towards the eastern boundary. Climate is continental and humid with cold winters and snowfall in the county varying from 70 inches in the southwest to 120 inches in the northeast. Summers are generally pleasant.

Twelve creeks and branches provide drainage. All eventually drain into the Conneaut Marsh and Outlet. Runoff from the TNT production area enters Wood's Run. McMichaels Run goes north draining the western part of the site. Sandy Creek on the western side, Williams Run, and an unnamed creek on the east comprise the remainder of the drainage conduit for the reservation.

4. SITE HISTORY: The Department of the Army acquired a total of 14,437.80 acres (14,262.60 acres fee and 175.20 acres easement) by various deeds and condemnation proceedings between 1941 and 1944 for the establishment of Keystone Ordnance Works. Under the direction of the U.S. Engineers, Fraser-Brace Engineering Company, Inc. began construction of the facility 9 December 1941 and completed the project on 15 June 1943. The

company operated the plant for the production of flaked trinitrotoluene (TNT) under the supervision of the U.S. Army Ordnance Department. The General Chemical Company designed, constructed and operated the oleum plant in the acid area for manufacture of concentrated sulfuric acid. Initial operation of the Works began on 30 September 1942 and the oleum plant started operations on 6 October 1943. KOW consisted of 12 TNT manufacturing lines (6 pairs) with the necessary facilities for the manufacture, recovery, purification, concentration and mixing of the acid reagents incident to TNT manufacture as well as the disposal of processing waste materials.

The plant consisted of 506 buildings with a total floor area of 987,319 square feet. The facilities included nitrating houses, absorption towers, wash houses, flaking and packing houses, sulfuric acid concentrators, nitric acid plants using anhydrous ammonia; all necessary steam and power plant, water supply and wastewater disposal; all necessary outside lines for electricity, water, steam and air; all necessary railroad tracks, roads, walks, fencing, magazines, storage, warehouses and administration buildings, including the necessary utilities to service all the facilities, together with miscellaneous equipment and appurtenances.

The plant was ordered shut down by the Ordnance Department on 17 March 1944. The operating contractor, Fraser-Brace Engineering Company, Inc., was given a contract to decontaminate the TNT and acid production equipment. In September 1944, operations resumed. Operations ceased 16 August 1945. Orders were received to decontaminate the plant and disassemble piping and equipment. The equipment was steamed clean, some equipment was boiled for 60 hours, a flame thrower was used to heat metal pipes, sulfuric acid was distilled down and the plant was reconverted to peacetime uses.

The entire 14,437.80 acre site was reported excess to the War Assets Administration (WAA) on 19 November 1945. WAA assumed custody on 9 October 1946. Most of the site was sold to individuals. Between 1949 and 1956, 10,324.275 acres were conveyed by Quitclaim Deed through the Federal Farm Mortgage Corporation to over 200 owners.

In 1954, 4,163.30 acres were reacquired for the Army, who maintained the facility in a caretaker status. On 28 July 1958, a 510.00 acre portion was reassigned to the U.S. Army Reserve as an outdoor training site. On 29 March 1959, the Army reported 3,649.28 acres as excess to the General Services Administration (GSA) for disposal. On 5 October 1964, an additional 4.02 acres were reported excess to GSA. By Quitclaim Deed dated 24 March

1965, GSA conveyed 3,653.30 acres to the Meadville Area Industrial Commission (MAIC). In this deed, there was a hold harmless clause which covered five parcels of contaminated land totalling 193.10 acres.

MAIC conveyed 3,021.00 acres to Kebert Developers, Inc. (KDI) by deed in April 1965 for use as an industrial park. This deed passed on the language regarding the five contaminated parcels. KDI conveyed this acreage to Paul V. Kebert in 1981. When he died in February 1991, Larry Kebert assumed ownership. Three companies currently lease property from Mr. Kebert and exist on the site: Pittsburgh Plate Glass Corporation, Rusco, and Aero Forge. MAIC also conveyed 51.29 acres to various owners since 1965.

5. PROJECT DESCRIPTION:

AREA: A

Size, Acres:	580
Former Use:	TNT and Oleum Plant
Present Use:	Industrial/agriculture
Probable End Use:	Industrial/agriculture
Ordinance Presence:	None

AREA: B

Size, Acres:	5
Former Use:	Burning Grounds
Present Use:	Agriculture and forest
Probable End Use:	Agriculture and forest
Ordinance Presence:	None

AREA: C

Size, Acres:	1
Former Use:	Pistol Range
Present Use:	Agriculture and forest
Probable End Use:	Agriculture and forest
Ordinance Presence:	None

AREA: D

Size, Acres:	508
Former Use:	Magazine Area
Present Use:	Residential/Agriculture
Probable End Use:	Residential/Agriculture
Ordinance Presence:	None

AREA: E

Size, Acres:	12,834
Former Use:	Additional plant acreage
Present Use:	Residential/Agriculture/Industrial

Probable End Use: Residential/Agriculture/Industrial
Ordnance Presence: None

AREA: F

Size, Acres: 510
Former Use: Additional plant acreage
Present Use: U.S. Army Reserve Training Center
(Not FUDS eligible)
Probable End Use: U.S. Army Reserve Training Center

6. CURRENT STATUS: The Archives Search Report (ASR) for Keystone Ordnance Works was completed by the U.S. Army Corps of Engineers, Rock Island District, in October 1994.

7. STRATEGY: No Further Action (NOFA)

8. ISSUES AND CONCERNS: The Huntsville Center Technical Advisory Group recommended a strategy of NOFA, Risk Assessment Code (RAC) 5, for the entire site. TNT was the only ordnance and explosives (OE) item manufactured and stored at this site so that any residue left would be from raw materials used in the production of TNT, i.e., toluene, nitric acid and sulfuric acid, as well as TNT residues. A project to investigate for the possible presence of these chemical residues would be an HTRW project and would only become an OE project once it was determined that TNT residuals were of a concentration that was explosive in nature. Ten soil samples and some groundwater samples were analyzed for explosives as part of the findings of the Confirmation Study Report of October 1989. The results were concentrations below the detection limit and no indications of contamination, respectively. The Site Survey Summary Sheet states: "Due to the low levels of observed contaminants and the nature of the site, no additional groundwater investigation for HTW contamination is proposed. The result was NOFA for an HTW project."

HNC Safety Comments, ASR Review Control # 1-218, Undated: "A study by the USACE Omaha District of 1987 concluded that there were no detectable levels of explosives in the soil. This site was used to produce TNT and sulfuric acid. Ordnance was never located at this site. The ASR team found no evidence of OEW or TNT. Interviews with locals indicate no incidents involving OEW or TNT." "RAC updated. RAC 5, NOFA, assigned." This RAC is attached.

Natural Resources: Federally and State threatened species are listed in ASR Findings, pages 9-10, para 3f. An on-site inspection by appropriate State and Federal personnel may be

necessary to verify the presence, absence or location of listed species, or natural communities.

Historical Resources: The ASR indicates that the Pennsylvania Historical Preservation Office has no record of historical/cultural resources at the site. Any intrusive measures taken within the area will require oversight by the State Historical Preservation Office and/or other like organizations.

9. **SCHEDULE SUMMARY:** NOFA

10. **FUNDING/BUDGET SUMMARY:** N/A